Gamification is one of the hottest trends in the global marketing — in their report called "Gamification Market — Global Forecast to 2020" (2014), Markets and Markets research company forecasts that in 2020 the market of gamification mechanics solutions will be $11.1 billion in value. One might think it’s a lot in the context of a game — something that would rather be associated with

Gamification as defined as the use of game mechanics to increase the recipient's engagement. It’s used in various fields: education, parenting or employee management. It is also one of the most rapidly growing trends in marketing worldwide. Using the game mechanics to increase consumer's engagement is commonly used in nearly all product categories. People enjoy playing games and companies use it to attract and involve the consumers in their brands’ activities. Gamification is still underdeveloped in the field of the marketing research and its effectiveness needs systematic verification in the experimental research. The researchers indicate the positive effect of gamified research on the respondent's engagement and openness — inducing the "hot state" by using games helps to explore the true motivations and retrace the real behavior. This text has two objectives. Firstly, to present the current state of knowledge about the effectiveness of gamification in market research. Several experiments carried out by Jon Puleston prove that the use of gamified tasks is more effective and involving than the standard way of asking questions in the market research questionnaires. Secondly, to report the results of author's own experiment carried out to verify the hypothesis about the effectiveness of the chosen gamification techniques: the extended personification together with the role-playing mechanisms and the wider narrative context added to the standard questionnaire questions. The hypothesis was confirmed — gamified market research increases the respondents' productivity in comparison with the standard tasks and also with the use of the well-known projective techniques.

Keywords
gamification in market research, qualitative market research


Słowa kluczowe

grywalizacja w badaniach marketingowych, jakościowe badania marketingu

Gamification as an effective method in the modern market research

Grywalizacja jako skuteczna metoda wykorzystywana w nowoczesnych badaniach marketingowych
fun, leisure activities and hardly ever something serious. Yet, the budgets of new video games, quite often exceeding movie budgets, reveal that you can make good profit on players. Also the rapidly growing popularity of board games proves that gaming is becoming one of the most favourite ways to spend time with friends. Annual Spiel fair in Essen are visited by several tens of thousands of people and more and more Kickstarter campaigns gather millions of dollars effecting in beautifully designed games with innovative mechanics.

In his Man, Play and Games (1961) Caillios wrote that a game introduces the mood of relaxation or entertainment, it relaxes and amuses at the same time, acting contrary to work. This already classic text (first edition in 1958) also mentions groundlessness of a game — the attribute which both discredit the game and makes the game spirit seem one of the basic impulses of shaping moral grounds and intellectual progress of an individual. By the mere act of playing we have fun, turn more spontaneous, unconstrained and do not feel consequences of our actions. This is a major strength of playing affecting one’s involvement and sincerity of reactions and behaviour.

Huizinga in Homo Ludens (1949) followed by Caillios (1961) mentions various forms of a game: based on competition (agon), randomness (alea), role playing (mimesis) and transformation (ilinx). A game is not just collecting points while hitting flipper buttons — this is also running with a racket in a tennis court or with an axe in the mountains acting as a dwarf during LARP (Live Action Role Playing), or betting zero again in a roulette.

Players have different motivations and expectations from a game too. Bartle (cited: Tkaczyk, 2012) created an interesting typology dividing players into four groups: achievers focused on getting points and competing against other players, explorers who experience self-fulfilment while exploring the world of a game, socialisers — mainly interested in relationships with other players and killers who seek power and dominance.

Designing gamification processes, one should bear in mind these classifications — not everyone who want to participate in a game aiming at killing other players. This is of utmost importance when planning activities based on game mechanics in qualitative market research where various types of players (and non-players as not all participants of research may have experience with games) may meet during one session. Planning game mechanics, one should not concentrate on a single type of mechanics, bearing in mind that during a session people do not choose their favourite game from a shelf but it is the researchers who determine choice of a game during the study.

Employing game mechanics to increase consumer’s involvement is popular in numerous fields. An interesting overview has been prepared by Tkaczyk (2012) showing applications of gamification in marketing, HR as well as education. This concept has been known and used for years in these areas. However, gamification in market research is still young but already so well developed that every major research agency works on their own tools using game (and play) mechanics. Researchers (e.g. Harrison, 2011) report positive effects of using games in research — increasing involvement and openness of respondents, as well as leading to a “hot” behavioural condition when it is easier to reach true motivation and to reconstruct actual human behaviour. Considering functions, gamification could be classified as an elaborate projective technique tempting and engaging participants with its form and a promise of nice pastime. Involved in a pleasant activity, people are more committed, creative and it’s easier to reach their hidden beliefs and motivations then.

Gamification in the market research

Gamification plays a double role in the market research: it boosts involvement and lets us elicit information which is concealed during a rational conversation.

The former role stems from research participants getting bored — when they fill in a quantitative questionnaire resembling a tax form as well as taking part in a focus group on a new tariff of a mobile telecom provider. Even the most interesting theme may turn boring when we deal with several positioning concepts involving a series of detailed questions on insight, benefit, RtB (reason to believe) and numerous other elements. If this is served as a game, with boards, multiple colourful cards and play, the process is varied and participants are likely to survive until the end with the same attention span and continued enjoyment of a high class meeting.

The other feature of gamification originates from the distinctive impact of a game upon human cognitive and emotional performance. First of all, a good game is involving, it sets players in a condition which is close to flow (Csikszentmihalyi, 1990), described as a status between satisfaction and euphoria, and which is activated by complete devotion to an activity we perform for the very fun of doing it. Obviously, one should be aware that participating in a game during a market research does not offer the same
emotions as a perfect performance in the favourite video game. Nevertheless, during a study participants enter a more in-depth interaction level — they not only discuss but play, get involved, sometimes compete, and lose themselves in what they are doing. This gives more in-depth learnings and varied perspectives of an examined topic — including use of all sorts of stimulus materials. Here a game can be treated as an elaborate and highly involving projective technique. Many people fond of Role Playing Games claim that playing roles lets us show who we really are and what we believe. A similar mechanics is observed during market research.

A description of game mechanics application in market research should address two levels: so called "soft" and "hard" gamifications.

"Soft" gamification

"Soft" gamification involves using game mechanics to add more enjoyment to the process of answering questions. This applies mostly to quantitative studies, yet such mechanics can be easily adapted to the qualitative approach.

"Soft" gamification is an enhancing questionnaire design by changing user’s interface — it looks different: we can see a scroll bar linked to graphic elements replacing traditional scales, and drag&drop methods e.g. to define a position of a brand on an image scale. Such steps increase response rate, completion rate and respondent’s satisfaction with participating in the study. On the other hand, some solutions based on question asking methods are used. Placing them in context has proven to improve quality of obtained information.

The first research on the topic was conducted by Puleston and Sleep (2011). The researchers defined a game as "any thinking activity which is done for fun" and enriched the tasks with additional elements such as transforming a question into a task/challenge, adding a limitation changing a task into a game or assessment criterion in points.

In one of their experiments they asked a control group to evaluate any number of artists from a pre-defined list. The experimental group’s task was to create a playlist of their radio playing music participants enjoyed themselves. When creating the playlist, they had to assess selected artists as well. The experiment outcome is an argument for contextual tasks: the control group evaluated total of 83 artists, while the number in the experimental group amounted to 148.

Another experiment confirmed effectiveness of a simple projective technique of personification. The control group was asked to name features matching a given brand — on average three features were named and participants spent 12 seconds to perform a task. The experimental group imagined a brand as a person — the number of listed features doubled and time spent on doing a task reached 43 seconds. Projective techniques are a form of gamification too — they stimulate imagination of participants, which is the element many games are founded on.

Researchers have also discovered effectiveness of introducing time limits to a task ("you have unlimited budget, you enter a supermarket and you can buy all your favourite groceries — yet you have just two minutes to do it" — the number of answers increased nearly six times as compared to a regular task: "name all your favourite food products") or adding challenging words: "can you...?", "will you manage to...?". Introducing mechanics assigning points increased participants’ involvement and their satisfaction with taking part in the study.

Another way to increase the effectiveness of the respondents discovered by Puleston and Sleep (2011) is to add and abstract rule to a question. The authors give an example of a research where the original question: "How would you describe yourself?" was replaced with: "In exactly seven words how would your friends describe you?". The number of descriptors raised from the average of 2,4 to 4,5 in a gamified version.

Further confirmation of gamification methods comes from the outcome of an experimental study of Puleston and Rintoul (2012) run in seven markets: two western and five Asian markets. Participants of the control group were asked to name their favourite Olympic disciplines. The experimental ("gamified") group was asked to imagine they are responsible for TV broadcasting of the Olympic Games in London in 2012 and their task is to prepare the broadcast plan assuming that their broadcasting company will show only the disciplines they would like to watch (the latter condition seems of key importance to keep balance between both groups, and thus — appropriate standardisation of the experiment). The outcome of the experiment reveals that regardless of a country where the experiment was performed, adding context increases average number of listed disciplines vs the control group. The greatest differences can be seen on the markets with low response rate in control groups — in China and Korea the average score was tripled. The lowest growth was observed in the United States where the highest response rate was recorded in the control group.

One should comment upon credibility of obtained data here. Does changing the context,
adding a limit or presenting a task as a challenge still deliver the same information as the version without gamification element? Puleston and Sleep (2011) state that the fact of taking part in a game affects participants’ way of thinking — they are more involved, spend more time to answer questions and their answers are higher in number and more elaborate. Another experiment showed that it may influence obtained data as well. The control group was asked a question about the best holiday destinations. Participants of the experimental group were to imagine they are reporters from a travel magazine and they were asked the same question. The group with contextualised task gave 60% more answers, which were also different in terms of quality from the control group. The prevailing destination in the control group was Spain, whereas acting as magazine reporters, participants named more distant and prestigious holiday spots like e.g. New Zealand.

Planning gamification one should be most careful about potential change of the context of giving answers — the dishes people are most likely to list as their favourite would differ from what they would name in the menu of their last meal in death chamber (this example also comes from the text by Puleston and Sleep).

An additional benefit of introducing game mechanics to market research is attractiveness of the process perceived by respondents. Puleston and Sleep (2011) offer data confirming far higher satisfaction with participating in a game type of study vs the traditional approach. In the former case over 90% participants coded the top box on the four-point scale (namely: “I really enjoyed it”), whereas in the approach without gamification element this score was indicated by not many more than 20% respondents. 400 people took part in the study — usually three or four. Then a moderator presents the context: the people they have just described land on a desert island after a cruise ship disaster. And that’s where the game begins. The board — barbarians come and we learn how to reach it. A well-designed game may aid participants moving around the city, entering stores, meeting friends and using internet at work? My research practice shows that the latter option is both more effective and pleasant for the respondents.

One of the games designed for a specific research area is Brand Secret — a tool created by a market research company Kantar to examine brand images and define archetypes thinking about a brand is focused on (compare e.g. Mark and Pearson, 2001). The subsequent part of this article will present the findings of initial studies demonstrating effectiveness of such games.

Brand Secret is an elaborate projective technique based on personification and narration. The players — study participants — focus on a board of a desert island. In their first step they make an initial study — usually three or four. Then a moderator presents the context: the people they have just described land on a desert island after a cruise ship disaster. And that’s where the game begins. The game does not involve competition or collecting points but it aims at story telling. Participants talk about brands’ adventures on the island — from organising a place to live, appearance of huts, up to interpersonal relations and roles people play. Various key areas of the island are marked on the board — barbarians come and we learn how castaways react to danger. There is a cave of recollections in another place where brands recall their lives before the disaster, they speak about what they miss and think about things which mattered for them. This elaborate story is used to analyse an archetype (or archetypes) manifested by analysed brands. The board comes with other props in the form of numerous cards with personality features, life strategies and values assigned to brands at various stages. The outcome of the task is a thorough analysis of image combined with a brand position on the archetype wheel.

Brand Secret can be played throughout the focus group session, yet it can also be used just to aid...
personification. It highly facilitates such an abstract operation as assigning human features to a brand when respondents do it in a defined context gathered around a colourful board. The shortened version of the game takes half an hour and is an invaluable aid in qualitative studies on image.

If participants of a focus group are users of different brands, RPG (Role Playing Games) mechanics can be employed and instead of speaking about overall narrative about the life of castaways, participants can be asked to play their roles acting as personas developed around the brands they use. It bears characteristics of a confrontation group, where users of two competitor brands exchange their opinions. Yet, here a gamification effect is present as well — playing one’s role, simulating attitudes and reactions of a brand. Moderator observes both behaviour of a player and attitudes of the other participants towards this person. The achieved depth of technique is incomparable to standard methods of examining image.

Author’s own research

The studies on effectiveness of gamification in the market research (and other areas) so far seem fairly meagre. Puleston, whose research findings have been presented in the previous part of this text, has run numerous experiments but they miss a reliable methodological approach, application of statistical methods in data analysis and replication of findings. Employing gamification in market research facilitates its implementation, focus group moderators and clients can see the added value of games and advanced projective techniques — obtained answers are in-depth, we get much more information and respondents are more involved and simple spend a nicer time. These are extremely important benefits. Nevertheless, a scientific approach towards this theme is required — it becomes increasingly common and customers often ask about effectiveness of techniques based on games, when considering choice of a proposal presenting such approach. Hard statistical data revealing supremacy of gamification techniques vs a standard approach is key for the future development of this branch of market research and for improving its appeal to potential clients.

The next chapter presents the outcome of the author’s first own study carried out to verify effectiveness of gamification employing elaborate narrative techniques.

Research methodology

I conducted the experimental study on 63 students of Management Faculty of the University of Warsaw split into three groups:
- control (no aiding techniques were used),
- experimental 1 (with aiding techniques, not based on gamification),
- experimental 2 (gamification).

The respondents were handed out a questionnaire with three tasks — their content was different in respective groups and will be presented in the subsequent part of the chapter. No time limit was imposed.

I have formulated a general hypothesis: employing advanced gamification techniques improves effectiveness of research participants.

The experimental manipulation varied across the tasks, so all the detailed hypotheses will be presented in description of subsequent parts of the experiment.

Task 1 — brand image study

The respondents received a matrix with 40 attributes that can be assigned to a brand (for instance: friendly, active, trustworthy and modern). Their task was to mark which of these attributes go well with three brands of beer: Żywiec, Żubr and Desperados. This is one of approaches employed in questionnaire tests of brand image. A frequently experienced problem here is low involvement of respondents, which leads to low number of generated answers. The aim of this task was to check what kind of instruction will result in the highest number of answers given by respondents. One should note here that I examined only number of named features — in future experiments I also plan to analyse quality of attributes spontaneously assigned to brands — not prompted with a list.

The task description varied across the three examined groups:
- The control group was asked to name attributes with no additional aiding techniques. They received the following instruction: “Think about three brands of beer: Żywiec, Żubr and Desperados. For each brand circle the attributes you believe go well with it.”
- In the experimental group 1 (soft gamification) a projective personification technique was introduced and then respondents were asked to name fitting features. They received the following instruction: “Imagine these three brands of beer as people: Żywiec, Żubr and
Desperados. Think what gender they are, how old they are, what they wear, what values they follow, what personality they have and how they function in interpersonal relationships. Then for each brand circle the attributes you believe go well with it.

- In the experimental group 2 (hard gamification) elements of the previously described narrative game — Brand Secret were used, and respondents received the following instruction:

"Imagine three brands as people: Żywiec, Żubr and Desperados. Think what gender they are, how old they are, what they wear, what values they follow, what personality they have and how they function in interpersonal relationships. Then imagine that these three people (brands) land on a desert island after a ship disaster. They need to organise a place to live, they try to act together, they have some day rhythm and play various roles in this small group. Think how these people feel on the island, what matters to them, what they miss, what they fear? Imagine an attack of cannibals and how each of these characters would act. You can also invent any adventures which may happen on the island. Then for each brand circle the attributes you believe go well with it."

I formulated the following specific hypothesis.

Hypothesis for task 1: The number of attributes named in the experimental group 2 will be significantly higher than the number of attributes assigned to brands by experimental group 1 and control group.

I also put forward a hypothesis that a significantly higher number of attributes would be named in the experimental group 1 than in the control group.

I assumed that use of projective technique will be more effective at eliciting brand attributes than not using any aiding technique whatsoever. The main hypothesis of the task stems from the fact that advanced narrative technique, going far beyond the standard personification, will result in the highest number of named attributes.

One-way analysis of variance was used to analyse differences in average numbers of named attributes (total for all the three brands) between groups. It revealed statistically significant difference, and high size of the effect:

\[ F(2,58) = 12,33; p < 0,001; \eta^2 = 0,30. \]

Significance of differences between particular groups was calculated with a post hoc test with Bonferroni correction. The outcome is presented in figure 1. The arrows mark statistical differences at \( p < 0,05 \) significance.

The group based on the narrative gamification technique indicated significantly more attributes than the personification group and the control group. The hypothesis for task 1 has been confirmed. So has the additional hypothesis: using personification is more effective than not employing any facilitating technique.

One should note that the analysis for each separate brand brought similar effects — the difference between experimental groups was not significant only for Żubr (although the experimental group 2 proved more effective than the control group). However, I would prefer not to comment upon such nuances based on the initial findings.

It seems worthwhile noting that the experimental group 1 did not prove more effective than the control group.
This reveals the power of gamification techniques and their usefulness in brand image studies.

**Tasks 2 and 3 — role of context**

Tasks 2 and 3 were constructed along the same lines and will be described together. In both tasks the respondents generated solutions which were then statistically analysed.

The objective here was to replicate the outcome of Puleston and Sleep (2011) or Puleston and Rintoul (2012) studies and showing that defining desired number of solutions and creating a context increase effectiveness of questionnaire studies. Task 2 was designed as more difficult and abstract. Task 3 aimed at showing a pure effect, with no burden of additional cognitive challenges.

The respondents were divided into the following groups.

Control group was asked to come up with ideas without any additional aiding techniques. They were instructed to do the following:

**Task 2:**
"Describe the reality around you using adjectives"

**Task 3:**
"Name various ingredients of pizza"

In the experimental group 1 another rule was introduced — the findings of the previously quoted studies by Puleston and Sleep (2011) signify that such a step leads to generating more ideas. The respondents were instructed to do the following:

**Task 2:**
"Describe the reality around you using exactly 7 adjectives"

**Task 3:**
"Name exactly 10 ingredients of pizza"

In the experimental group 2 context was added — the respondents were asked to imagine themselves in a given situation and then give answers. They were instructed to do the following:

**Task 2:**
"Imagine you are about to take part in a competition to present the Earth to aliens — the winning piece describing the reality on the Earth will be placed in a space probe and sent to the space. Describe the reality around you using adjectives"

**Task 3:**
"Imagine you open a pizza house and create a list of ingredients your guests can choose composing their own tailor made pizza. You want to cater to all tastes and reach many types of customers. Name ingredients of pizza you would offer in your menu"

I made the following specific hypothesis. Hypothesis for tasks 2 & 3: The number of ideas respondents from the experimental group 2 will come up with will significantly outnumber the figures in the experimental group 1 and the control group.

I also put forward a hypothesis that a significantly higher number of ideas would be generated in the experimental group 1 than in the control group.

Adding the principle (use/name exactly x words) to a regular instruction of naming some elements should result in a higher number of ideas named by respondents. Participants are motivated to meet researcher’s requirements. Even if they do not find the topic captivating, they try to deliver the required minimum. This is a simple technique of boosting effectiveness, yet it is not frequently used in questionnaire construction.

Creating a context leads to higher involvement of the respondents — this is no longer the need to meet the set requirements, but it relies on using imagination and transforming a research situation into a narrative game.

One-way analysis of variance was used to analyse differences in average numbers of ideas generated by respective groups.

It revealed statistically significant difference in task 2 where reality was to be described, and high size of the effect:

\[ F(2,57) = 5.77; \ p = 0.005; \ \eta^2 = 0.17. \]

Significance of differences between particular groups was calculated with a post hoc test with SNK correction. The outcome is presented in figure 2. The arrows mark statistical differences at \( p < 0.05 \) significance.

No statistically significant differences have been observed between the experimental groups, yet they were both more effective than the control group.

The hypothesis for task 2 has not been confirmed, although the experimental group 2 generated more ideas than the control group. Yet, the additional hypothesis has been confirmed: using an additional rule is more effective than not employing any facilitating technique.

It revealed statistically significant difference in task 3 where respondents named ingredients of pizza, and high size of the effect:

\[ F(2,58) = 20.59; \ p < 0.001; \ \eta^2 = 0.42. \]
Significance of differences between particular groups was calculated with a post hoc test with Bonferroni correction. The outcome is presented in figure 3. The arrows mark statistical differences at $p<0.05$ significance.

All the mean values are statistically different. The hypothesis for task 3 has been confirmed: the experimental group 2 generated more ideas than the other two groups. The additional hypothesis has been confirmed too: using an additional rule is more effective than not employing any facilitating technique.

**Discussing the findings**

The analyses described in the chapter have confirmed most of the hypotheses set in the study. Gamification boosts effectiveness of questionnaire tasks — not only vs the control group but vs the group where various techniques facilitating the process of answering questions were employed.

Lack of differences between the experimental groups in task 2 may be explained with the task complication — the difference occurred in task 3 where the instruction was simple and
respondents from the group relying on narrative and context easily outperformed respondents who were to name exactly 10 ingredients of pizza. It is worth noting that the latter proved extremely obedient — the average score in this group was 9.94. In future it may be worth checking what will happen if the limit is set at 13 — will the figures for both groups be parity, or is it the limit attainable only for the group exposed to gamification techniques?

The learning of great importance is the identified difference between the standard projective technique in task 1 and employing Brand Secret game elements which is commonly used in market research. It proves that gamification is more than just the methods of increasing effectiveness of research participants known so far and using it has a favourable impact upon the achieved research outcome.

Conclusions

Market researchers want participants possibly the highest involvement in the study and deliver output which can be analysed. The aim of the experiment described above was searching for ways to maximise respondents’ effectiveness. Employing mechanics known from narrative games, creating a context and relying on imagination have all proven to significantly boost the output delivered by participants.

Gamification in the market research is still very young and it requires systematic studies on effectiveness of employed methods and techniques. While experiments showing effectiveness of "soft" gamification in quantitative studies are quite easy to plan and run, the task seems fairly difficult in qualitative approach where actually the entire process becomes a game. The main issues here include effectiveness measures as well as proper design of a control group. I am convinced though that the next years will bring many interesting learnings to prove effectiveness of gamification methods in the market research. We will also see an increasing number of games being ready formatted tools aiding all sorts of branches of qualitative market research.

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